

Title (en)
SYSTEM AND METHOD FOR AUTOMATIC DETECTION, LOCALIZATION, AND SEMANTIC SEGMENTATION OF ANATOMICAL OBJECTS

Title (de)
SYSTEM UND VERFAHREN ZUR AUTOMATISCHEN ERKENNUNG, ORTUNG UND SEMANTISCHEN SEGMENTIERUNG ANATOMISCHER OBJEKTE

Title (fr)
SYSTÈME ET PROCÉDÉ DE DÉTECTION AUTOMATIQUE, DE LOCALISATION ET DE SEGMENTATION SÉMANTIQUE D'OBJETS ANATOMIQUES

Publication
EP 3482346 A1 20190515 (EN)

Application
EP 17737988 A 20170629

Priority
• US 201662359726 P 20160708
• US 201662429157 P 20161202
• US 201762500750 P 20170503
• US 2017039923 W 20170629

Abstract (en)
[origin: WO2018009405A1] The present invention is directed to a system and method for automatic detection, localization, and semantic segmentation of at least one anatomical object in a parameter space of an image generated by an imaging system. The method includes generating the image via the imaging system and providing the image of the anatomical object and surrounding tissue to a processor. Further, the method includes developing and training a parameter space deep learning network comprising convolutional neural networks to automatically detect the anatomical object and the surrounding tissue of the parameter space of the image. The method also includes automatically locating and segmenting, via additional convolutional neural networks, the anatomical object and surrounding tissue of the parameter space of the image. Moreover, the method includes automatically labeling the identified anatomical object and surrounding tissue on the image. Thus, the method also includes displaying the labeled image to a user in real time.

IPC 8 full level
G06V 10/25 (2022.01)

CPC (source: EP KR US)
G06F 18/251 (2023.01 - EP KR US); **G06N 3/08** (2013.01 - KR); **G06T 3/40** (2013.01 - KR); **G06T 7/0014** (2013.01 - KR US); **G06T 7/11** (2016.12 - KR US); **G06T 7/40** (2013.01 - KR); **G06T 7/75** (2016.12 - KR US); **G06V 10/25** (2022.01 - EP KR US); **G06V 10/803** (2022.01 - EP KR US); **G06V 10/82** (2022.01 - EP KR US); **G06V 30/274** (2022.01 - KR US); **G06T 2207/10016** (2013.01 - KR US); **G06T 2207/20081** (2013.01 - KR US); **G06T 2207/20084** (2013.01 - KR US); **G06T 2207/30004** (2013.01 - KR US); **G06V 2201/031** (2022.01 - EP KR US)

Citation (search report)
See references of WO 2018009405A1

Cited by
WO2022220779A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2018009405 A1 20180111; AU 2017292642 A1 20181213; AU 2017292642 B2 20220804; EP 3482346 A1 20190515; JP 2019525786 A 20190912; JP 6947759 B2 20211013; KR 20190028422 A 20190318; MX 2018015394 A 20190422; US 11151721 B2 20211019; US 2019311478 A1 20191010

DOCDB simple family (application)
US 2017039923 W 20170629; AU 2017292642 A 20170629; EP 17737988 A 20170629; JP 2018566504 A 20170629; KR 20197000221 A 20170629; MX 2018015394 A 20170629; US 201716315237 A 20170629